NEW YORK STATE Integrated Pest Management PROGRAM

Cornell University Cooperative Extension

Elements of IPM for Dry Beans in New York State

MAJOR PESTS		
Insects	**Diseases**	**Weeds**
No major pests	Root Rots	Broadleaves • Nightshades
		Annual Grasses
		Perennial Weeds • Horsenettle
POTENTIAL PESTS		
Insects *	**Diseases**	**Weeds**
Mexican Bean Beetle	Anthracnose	
Potato Leafhopper	Halo Blight	
Seedcorn Maggot	Common Blight	
	Brown Spot	
	Sclerotinia White Mold	
	BCMV	

*Scout to determine if treatment is needed

A. SITE PREPARATION AND SELECTION	Acreage Goal	Points
1) Review weed history and weed map/list. Use in choosing appropriate control strategies. Choose weed control strategies based on scouting information. See the Weed Assessment List available for use in satisfying this element.	50%	10
2) Crop rotation. Rotate with a small grain, field or sweet corn, or forage crop. Minimum three years away from vegetables or soybeans, longer depending on field history of root rot and white mold.	75%	10
3) Soil test every third year or prior to bean crop. Fertilize according to tests and crop requirements. Maintain records.	100%	5
4) Site specific soil sampling and application of lime and fertilizer.	1%	3
5) Calibrate sprayer before each growing season to ensure proper application rates and coverage.	100%	10

B. Planting		
1) Use certified western grown seed, preferably from an arid climate.	90%	10
2) Use seed treated with insecticide and fungicide for protection from seed maggots and diseases.	75%	5
4) Test use of available biological seed treatments.	1%	3
5) Calibrate seeder for seed size to obtain proper plant population. Conduct final stand count and compare to seed population. Evaluate causes of stand loss 2-3 weeks after planting.	25%	5
C. CROP MONITORING		
1) Scout for insects and diseases a minimum of two times per season.	75%	10
2) Rely on scouting and economic thresholds to determine treatment needs.	75%	10
4) Update weed map/list of the field when small for use in evaluating the current year's weed control and for use in determining if a post emergent treatment is needed. See the Weed Assessment List available for use in satisfying this element.	50%	5
5) Time post-emergent weed control according to crop stage, weed species, and size.	50%	5
6) Cultivate to control escaped weeds.	50%	5
7) Keep records of pest densities, root rot type and severity, biological control techniques used, cultural procedures, and pesticide use.	100%	5
8) When considering pest control, utilize methods that have the least impact on the environment and natural enemies.	25%	5
D) Post Harvest		
1) Make (or update if one has been made for this field previously) a weed map/list of the field for use in planning for next year. See the Weed Assessment List available for use in satisfying this element.	50%	10
2) To improve soil tilth and repair compaction either subsoil if conditions allow, or rotate with a sod crop.	20%	5
3) Till under crop residue to speed breakdown and reduce carryover of disease inoculum.	20%	5

Total Points Available:	141
Points Needed to Qualify (80%):	113

TO LEARN MORE...

Specific information about the use of these IPM elements can be found in the following publications:

Recognition and management of dry bean production problems. 161NC198.

Bacterial diseases of beans. 102VCFS729.50

Bean anthracnose. 153VCFS729.40

Virus diseases of snap and dry beans. 153VCFS729.30

Integrated Crop and Pest Management Guidelines for Commercial Vegetable Production.

A Method to Measure the Environmental Impact of Pesticides. 1992. New York Food and Life Sciences Bulletin Number 139.

The above reference material can be obtained from county Cornell Cooperative Extension offices.

The references below can be ordered from the Bulletin Room, Jordan Hall, NYSAES, Geneva, NY 14456-0462:

Root rot of snap beans in New York. New York Food and Life Sciences Bulletin Number 110.

White mold of beans in New York. . New York Food and Life Sciences Bulletin Number 77.